



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.          | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 09/618,950               | 07/19/2000  | Brian Lo Bue         | CISCO-1608          | 2135             |
| 49715                    | 7590        | 04/14/2006           | EXAMINER            |                  |
| THELEN REID & PRIEST LLP |             |                      | STRANGE, AARON N    |                  |
| CISCO                    |             |                      | ART UNIT            |                  |
| P.O. BOX 640640          |             |                      | PAPER NUMBER        |                  |
| SAN JOSE, CA 95164-0640  |             |                      | 2153                |                  |

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |               |
|------------------------------|-----------------|---------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)  |
|                              | 09/618,950      | LO BUE ET AL. |
|                              | Examiner        | Art Unit      |
|                              | Aaron Strange   | 2153          |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 January 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-42 is/are pending in the application.  
 4a) Of the above claim(s) 13-30 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12 and 31-42 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments filed 1/30/2006 have been fully considered but they are not persuasive.
2. With regard to claim 1, and Applicant's assertion that "The Examiner's statement...ignores the language of Claim 1, which requires that the memory store (1) the network address of *each* of said device adapters and (2) an identification of *each* USB device connected to *each* of said device adapters", it should be noted that no such language appears in claim 1. Therefore, Applicant's argument with respect to this point is moot.
3. With further regard to claim 1, and Applicant's assertion that Ben-Dor "does not teach configuring a remote control host driver so that it is capable of communicating with *each* USB device connected to *each* device adapter" (Page 20, Line 29 to Page 21, Line 5), the Examiner respectfully disagrees. As an initial matter, it is noted that such a limitation does not appear in claim 1. Furthermore, even if such a limitation were present, it is taught by Ben-Dor.

Ben-Dor clearly discloses that the remote control host driver (Fig 1C, 204) may communicate with *each* USB device connected to *each* device adapter of which it is aware (at least ¶159-172). Each device adapter (RPS) transmits a topology map of its local bus (containing identification and configuration information for *each* USB

device connected to the bus) to the host. The host may then communicate with any of the devices using the IP address of the device adapter and the identifier of the USB device (at least ¶68-69).

4. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant has simply failed to provide any evidence in support of the assertion that the remote control host in Ben-Dor is not capable of communicating with each USB device connected to each device adapter. Therefore, Applicant's assertion that "This premise is simply false" (Page 21, Line 11 of Remarks), unaccompanied by any supporting evidence, is not persuasive.

5. With regard to claim 2, and Applicant's assertion that Ben-Dor "says nothing about storing the network address of each device adapter, and storing an identification of each USB device" (Page 22, Lines 13-18 of Remarks), while Ben-Dor may not explicitly recite storing the address and identification information, such an operation is inherent. Ben-Dor discloses using the address of the device adapter and the identification information of the USB device when communicating with a USB device over the network (¶68-69). This information MUST come from the memory of the host device, and it MUST have been stored there in order to be present. Furthermore, since

both the device adapter address and the identification for the USB device are needed to send a communication to the USB device, the MUST have been simultaneously stored in the memory of the host device.

### ***Claim Objections***

6. Claims 43,45,46 and 48 are objected to because of the following informalities:
  - a. With regard to claim 43, there appears to be a typographical error "said network further connecting to one or more USB device adapters...to said remote host control driver" in lines 2-4. Similar language appears in claims 45,46 and 48. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
8. Claims 4,34,44 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. With regard to claim 4, the limitation, "said one or more USB ports configured for a connection to a network having....one or more device adapters" is unclear. This limitation does not appear to materially affect the apparatus (device adapter) claimed in

claim 1, and it is therefore unclear what applicant intends to incorporate into the device adapter with this limitation. The current language of the claim does not appear to limit the “one or more USB ports” of the device adapter itself in any way, and therefore adds no patentable weight to the claim. In the interest of expedited prosecution, this limitation has been addressed below, but it has not been given patentable weight.

10. With regard to claim 4, the limitation “a bridging task for receiving USB packets from the one or more USB devices coupled to the respective device adapters” is unclear. Claim 4 is an apparatus claim directed to a device adapter, but this recitation describes receiving packets from devices coupled to what appears to be different device adapters, making the claim unclear and generally difficult to follow.

11. Claims 34,44 and 47 are rejected under the same rationale as claim 4, since they contain substantially identical recitations.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-5, and 31-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Ben-Dor et al. (US 2002/0141418).

14. With regard to claims 1 and 31, Ben-Dor discloses a USB remote host control driver (fig. 1C, 204, and paragraph 46), comprising:

- a port for connecting to a network (201), said port configured to couple over said network one or more USB device adapters (RPS 205), each of said device adapters (205) having a discrete network address (IP address)(Fig. 1c and ¶41-42), to said remote host control driver;
- a network protocol stack, said protocol stack for encapsulating USB packets in network packets and for decapsulating USB packets from network packets (¶71); and
- a memory for simultaneously storing the discrete network address(es) (IP addresses) and a corresponding identifier (globally unique IDs) of each USB device connected via a respective USB device adapter to the driver (¶63-64, 69 and 156-172).

As discussed above in the Response to Arguments section, while Ben-Dor does not explicitly recite a memory storing the addresses and identifiers, it is necessarily present, and therefore disclosed by Ben-Dor.

15. With regard to claims 2 and 32, Ben-Dor further discloses a polling routine, said polling routine configured to contact each of said device adapters, identify each of said USB devices, and store the identifications in said memory (¶136 and 159-172).

16. With regard to claims 3, 5, 33 and 35, Ben-Dor further discloses that the network packets are Ethernet packets (¶90-91).

17. With regard to claims 4 and 34, Ben-Dor discloses a USB device adapter (RPS 205) comprising:

- one or more USB ports (¶41-42), said one or more USB ports configured for connection to a network (201) having a remote host control driver (Fig 1C, 204) having a memory for simultaneously storing a network address (IP address) of each of one or more device adapters and a corresponding identification (globally unique identifier) of each USB device connected via the respective one or more adapters (¶63-64, 69 and 156-172);
- a memory for storing an assigned network address (IP address, ¶42); and
- a network protocol stack, said protocol stack for encapsulating USB packets in network packets and for decapsulating USB packets from network packets (¶71).
- a bridging task (USB tunneling redirector) for receiving USB packets (URBs) from one or more USB devices coupled to the respective device adapters and for passing USB device addressing information and said USB packets (¶69) to said network protocol stack (¶73).

18. Claims 43,44,46, and 47 are rejected under the same rationale as claims 1 and 4, since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 6-10,12, 36-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Dor et al. (US 2002/0141418) in view of Krishnan (US 6,157,950).

21. With regard to claims 6 and 36, Ben-Dor discloses a USB remote host control driver (204), having:

a port for connecting to a local network (201), said port configured to couple over said network one or more USB device adapters (RPS 205), each of said device adapters (205) having a discrete network address (IP address)(Fig. 1c and ¶41-42), to said remote host control driver;

a local network protocol stack, said protocol stack for encapsulating USB packets in local network packets and for decapsulating USB packets from local network packets (¶71);

a memory for simultaneously storing the discrete network address(es) (IP addresses) and a corresponding identifier (globally unique IDs) of each USB device connected via a respective USB device adapter to the driver (¶63-64, 69 and 156-172);

a polling routine, said polling routine for contacting each of said device adapters, identifying each of said

However, Ben-Dor fails to specifically disclose an Internet gateway containing the USB remote host control driver.

Krishnan teaches connecting peripheral devices to a local area network and providing an Internet gateway to enable remote access to the peripherals via the Internet (Col 2, Lines 7-46 and Col. 3, Lines 21-28). This would have been an advantageous addition to the system disclosed by Ben-Dor since it would have allowed the USB devices to be accessed by hosts via the Internet, providing access to devices not typically accessible remotely (Col 1, Lines 46-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the USB remote control host driver into an Internet gateway in order to enable access to the USB devices via the Internet.

22. With regard to claims 7 and 37, Ben-Dor further discloses that the local network is an Ethernet (Fig. 1, 202, ¶90-91).

23. With regard to claims 8 and 38, Ben-Dor further discloses a processor for receiving unencapsulated USB packets from the protocol stack (¶71 lines 14-17).

24. With regard to claims 9 and 39, Ben-Dor further discloses a connection to a local video monitor (Fig. 1c, 204).

25. With regard to claims 10 and 40, Krishnan further discloses a gateway connection to a local telephone (Col. 1, Lines 33-36).

26. With regard to claims 12 and 42, Krishnan further discloses a gateway connection to a public telephone network (Fig. 8, Col. 11, Lines 41-55).

27. Claims 45 and 48 are rejected under the same rationale as claim 6, since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

28. Claims 11 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Dor et al. (US 2002/0141418) in view of Krishnan (US 6,157,950) in further view of Gottfurcht et al. (US 6,611,881).

29. With regard to claims 11 and 41, while the system disclosed by Ben-Dor in view of Krishnan shows substantial features of the claimed invention (discussed above), it fails to specifically disclose means for connecting to a public television cable.

Gottfurcht teaches connecting to the Internet via a number of means, including a television cable (Col 5, Lines 39-43). Such a connection is old and well-known in the art and is known for its large bandwidth at fairly low cost. It would have been apparent to one of ordinary skill in the art that such a connection could be used if so desired by a system designer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect to the network via a public television cable.

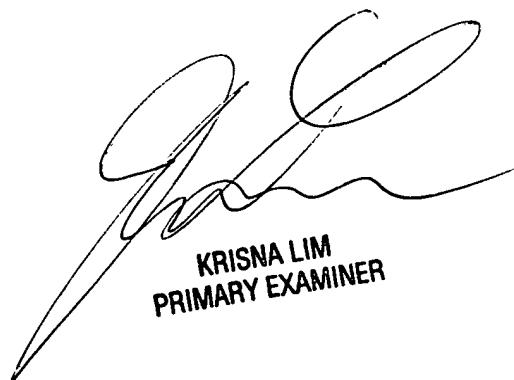
### ***Conclusion***

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS  
4/8/2006



A handwritten signature in black ink, appearing to read "KL".

KRISNA LIM  
PRIMARY EXAMINER